

## INTERNATIONAL SEARCH REPORT

Int. Application No.

PCT/GB 03/04499

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 G01V1/38

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 G01V

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 84 03153 A (KONGSBERG VAPENFAB AS) 16 August 1984 (1984-08-16) page 2, paragraph 5 page 3, paragraphs 3,4 page 6, paragraph 4 page 7, paragraphs 2,4 page 8, paragraphs 1-3 page 9, paragraph 5 figures 1,2	1-30, 35-38
Y		31-34, 39-42
X	GB 2 089 043 A (CHEVRON RES) 16 June 1982 (1982-06-16) page 1, line 73 - line 98 page 2, line 11 - line 62 claim 1; figure 1	1-30

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

28 January 2004

Date of mailing of the international search report

13/02/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax. (+31-70) 340-3016

Authorized officer

Schneiderbauer, K

## INTERNATIONAL SEARCH REPORT

Int Application No

PCT/GB 03/04499

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	COURT I.N.: "Applications of accoustics to source-array and streamer tow-point positioning" GEOPHYSICS, SOCIETY OF EXPLORATION GEOPHYSICISTS, vol. 56, no. 4, 1 April 1991 (1991-04-01), pages 558-564, XP002268338 page 559, right-hand column; figure 1 page 561	31-34, 39-42
X	US 4 187 492 A (DELIGNIERES ROBERT) 5 February 1980 (1980-02-05) column 2, line 19 column 2, line 50 - line 59 column 3, line 24 - line 28 claim 1; figure 1	1,19
X	US 4 376 301 A (ROBERTS F ALEX) 8 March 1983 (1983-03-08) column 2, line 59 -column 3, line 30 figure 1	1,19
A	US 4 641 287 A (NEELEY WALTER P) 3 February 1987 (1987-02-03) column 1, line 59 -column 2, line 62 column 3, line 20 - line 25 figure 1	39-42
A	FR 2 620 536 A (GEOPHYSIQUE CIE GLE) 17 March 1989 (1989-03-17) page 5, line 29 -page 7, line 3 page 7, line 23 - line 29 figures 1A,1B	1-42
A	US 4 669 067 A (ROBERTS F ALEX) 26 May 1987 (1987-05-26) column 2, line 65 -column 3, line 36 column 4, line 15 -column 5, line 23	1-42

## INTERNATIONAL SEARCH REPORT

 Int Application No  
 PCT/GB 03/04499

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 8403153	A	16-08-1984	NO 830358 A	03-08-1984
			AU 2438584 A	30-08-1984
			BR 8405066 A	26-12-1984
			EP 0134804 A1	27-03-1985
			JP 60500383 T	22-03-1985
			WO 8403153 A1	16-08-1984
GB 2089043	A	16-06-1982	AU 545131 B2	04-07-1985
			AU 7841581 A	23-09-1982
			BR 8107971 A	14-09-1982
			CA 1195762 A1	22-10-1985
			DE 3149162 A1	12-08-1982
			DK 545781 A ,B,	11-06-1982
			ES 8301032 A1	01-02-1983
			FR 2495783 A1	11-06-1982
			IT 1139931 B	24-09-1986
			JP 57141571 A	01-09-1982
			NL 8105493 A	01-07-1982
			NO 814197 A ,B,	11-06-1982
			NZ 199066 A	30-08-1985
			US 4555779 A	26-11-1985
			YU 289381 A1	31-12-1983
			ZA 8108225 A	27-10-1982
US 4187492	A	05-02-1980	FR 2393320 A1	29-12-1978
			BE 860770 A1	16-05-1978
			CA 1106487 A1	04-08-1981
			DE 2751616 A1	24-05-1978
			GB 1571138 A	09-07-1980
			IT 1087233 B	04-06-1985
			JP 1396098 C	24-08-1987
			JP 53064548 A	09-06-1978
			JP 62000471 B	08-01-1987
			NL 7712636 A ,C	22-05-1978
			NO 773931 A ,B,	19-05-1978
			NO 147618 A	
US 4376301	A	08-03-1983	AU 546727 B2	19-09-1985
			AU 7841681 A	23-09-1982
			BR 8107972 A	14-09-1982
			CA 1172346 A1	07-08-1984
			DE 3149163 A1	05-08-1982
			DK 545481 A ,B,	11-06-1982
			ES 8301368 A1	16-02-1983
			FR 2495784 A1	11-06-1982
			GB 2089042 A ,B	16-06-1982
			IT 1139932 B	24-09-1986
			JP 1609714 C	15-07-1991
			JP 2035954 B	14-08-1990
			JP 57160077 A	02-10-1982
			NL 8105494 A	01-07-1982
			NO 814198 A ,B,	11-06-1982
			NZ 199067 A	06-07-1984
			YU 192283 A1	28-02-1989
			YU 289281 A1	31-12-1983
			ZA 8108226 A	27-10-1982
US 4641287	A	03-02-1987	AU 580291 B2	12-01-1989

# INTERNATIONAL SEARCH REPORT

Int'l Application No  
PCT/JP 03/04499

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4641287	A	AU CA	4086585 A 1240782 A1
			07-11-1985 16-08-1988
FR 2620536	A	FR	2620536 A1
	17-03-1989		17-03-1989
US 4669067	A	NONE	
	26-05-1987		